

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions of claims in the application.

1 (Currently Amended). An optical path control device comprising an optical waveguide having

a clad layer of P-type (~~or N-type~~) formed on a substrate and a core layer of N-type (~~or P-type~~) stacked on the clad layer or a clad layer of N-type formed on a substrate and a core layer of P-type stacked on the clad layer, and

electrodes formed on both sides of a part of the optical waveguide,

wherein when a voltage is applied between the electrodes ~~to change~~ the refractive index at the part of the optical waveguide where the electrode is formed is changed.

2 (Currently Amended). An optical path control device comprising an optical waveguide having

a clad layer of P-type (~~or N-type~~) formed on a substrate and a core layer of N-type (~~or P-type~~) stacked on the clad layer or a clad layer of N-type formed on a substrate and a core layer of P-type stacked on the clad layer,

plural electrodes formed on both sides of the optical waveguide, plural incidence units provided at one end of the substrate, and plural emission units provided at ~~the other~~ a different end of the substrate,

wherein when a controlled voltage is applied to an arbitrary electrode of the plural electrodes, ~~is controlled to change~~ the refractive index at the part of the optical waveguide where

the electrode is formed[[,]] is changed so that light emitted from an arbitrary incidence unit and incident on the optical waveguide becomes incident on an arbitrary emission unit.

3 (Original). The optical path control device as claimed in claim 1 or 2, wherein the upper electrode is formed in a triangular shape.

4. (Original). The optical path control device as claimed in claim 1 or 2, wherein the position of incident light incident on the optical waveguide or the spot diameter of the incident light is controlled, thereby controlling the optical path of light.

5. (Original). The optical path control device as claimed in claim 2, wherein an algorithm function for realizing optimum control is used in order to selectively emit light from an arbitrary incidence unit to an arbitrary emission unit.